



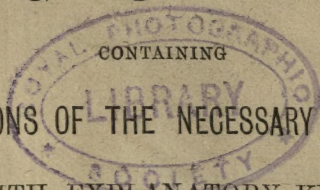
PRINTING AT HOME,

99
/

WITH

FULL INSTRUCTIONS

For Amateurs,



ILLUSTRATIONS OF THE NECESSARY MATERIALS,

WITH EXPLANATORY KEY,

SPECIMENS OF TYPE, ETC.

SECOND EDITION.

ENTERED AT STATIONERS' HALL.

ROCHFORD, ESSEX:

PRINTED AND PUBLISHED BY J. FRANCIS & SON.

PRINTING

AT HOME,

Full Instructions

for Apprentices

CONTAINING

ILLUSTRATIONS OF THE NECESSARY MATERIALS

WITH EXPLANATORY KEY

SPECIMENS OF TYPE, ETC.

SECOND EDITION

REVISED BY THE AUTHOR

ROBERT D. LEE

PRINTED AND PUBLISHED BY J. FRANCIS & SONS

INTRODUCTION.



The increasing demand for this Book of Instructions has induced me to issue a new and revised edition, which will be found to contain much valuable information, given in so plain a manner that the uninitiated may easily acquire this delightful and useful recreation.

THE AUTHOR.

CONTENTS.



	Page.
Unpacking Type... ..	8
Composing	8
How to hold the Composing Stick	9
Emptying the stick	12
Pulling Proofs	14
Correcting and making-up Pages	15
To Damp Paper and Cards	16
How to use Printing Presses	17
Distributing Type	20
Description of a fount of Type	21
Imposing	28
Hot-pressing, Folding, and Sticking	32
Cutting the Edges of Work	33
Bringing-up Wood Engravings	34
Printing in Colours	38
Printing in Gold and Silver... ..	39
To make Coloured Ink	40
To make a good Roller	42
Specimens of Type, &c... ..	13 to 54

PLAIN AND
PRACTICAL INSTRUCTIONS
FOR
AMATEUR PRINTERS.

There is probably no art or science calculated to afford so much gratification to amateurs as printing, inasmuch as it is a valuable handmaid or assistant to all other arts. It can be pursued without being a source of annoyance to anyone; makes no mess or litter if care is taken; its operations are silent, and can thus be carried on in the parlour or drawing room; while the act of multiplying copies of any kind of work by the aid of a printing press is generally viewed with delight by every member of a family. Printing may be made to afford a profitable amusement for many. Either parent may write an essay, poem, or a note to friends at a distance, a young lady daughter may "compose" it—*i.e.*, put it in type, and "proof" it; the proof may be read by all and corrected, it is then "made ready," and one rolls the "forme" or type, while another prints at the press. These operations so divided will form an endless source of gratification.

UNPACKING THE TYPE.

The type should be *carefully* untied when it is received from the warehouse, the outer papers taken away, and the type placed in a galley, say on a table with a piece of wood placed under the outer edge of galley, so that the type may stand in an inclined position as to its side. A galley is a piece of flat smooth wood, 6 by 8 inches, having at the near end and on the lower side a piece of wood, half-an-inch square, screwed on, against which the type will safely stand with the nick towards the open end. (See illustration 2.)

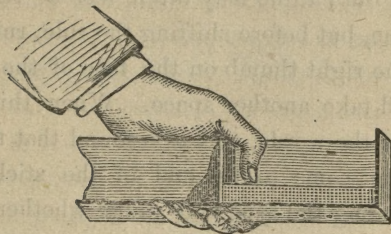
Wet the type with a damped sponge, this prevents it falling down; take a line carefully away by putting a "lead" at the back, cut to the same length as the type is wide. Place this type on the lead (with the nick or groove in sight, and face of type to you) into its proper boxes, as marked on plan.

COMPOSING.

The arrangement of types to form words, lines, and sentences, is called "Composing."

We will now suppose that the type is all laid in proper boxes of the case, the latter being placed in a convenient position, say at an angle, rather more than an ordinary writing desk, this enables the operator to see the position of the type in the boxes. Put the *plan* of the case conveniently, so that the eye may see in what compartment the several letters are marked.

Now, having the MS. copy before you, take the "stick" in the left hand, with the brass setting rule in it of a length to fit, holding it at a slight angle, so that when a type is placed at the lowest side it will *stand*



with the nick outwards; the left thumb should press lightly on the first letter placed in position, add another letter, place the thumb on that, another letter ditto, and so on, the thumb holding each letter as it is put in, (which it will do if the thumb is kept at an angle) till the first word is set up, put a thick space, set another word, put another thick space, and so on till the type reaches near the end of the measure selected, then equally space out the line by the aid of the spaces of various thickness. When the line is spaced so that it will not fall down, even though the stick should be tilted to a reverse incline, lift out the setting-rule from the back and place it in front of type set, then proceed as before, resting each letter against the rule and holding it in place by left thumb until another line of words is set and spaced out, again shift the rule as before, and so on for every fresh line.

In composing or setting up the type, it is of the greatest importance that every line should be of an equal length, if one line is spaced in the stick tighter than another, when locking-up, it will cause the looser lines to fall out; a line may often feel as tight as the previous one, but before shifting the rule, rub it on its feet with the right thumb on the face of the type and see if it will take another space. When thick spaces are between the words, and it is found that the line of type does not come to the end of the stick, the eye must run along the type and judge whether it would allow of two thin or two middling spaces between each word, so as to make it come even. Sometimes a word will not come in when thick spaces are between all the words, remove two or three thick and substitute middling spaces, and you get the word in as desired; or, occasionally, a word may be divided, having one portion in one line the remainder in the next, in this case a hyphen must be placed at the end of line containing the first portion; be careful in such a case to divide the word at a syllable.

It is well to get fixed in the mind, the width of the various spaces, taking an *em* quadrat as the standard of any fount—

2 ens	}	are equal to an <i>em</i> quad. [■]
3 thick spaces		
4 middling		
6 thin		

When using inverted commas to mark a quotation, put a thin space between the commas and the first

letter of the *word*, if the quotation has a comma or period at the end an extra space is not needed,—two inverted commas are used at the commencement, and two apostrophes at the end of each quotation.

If a line of capitals is used for the head of a subject, and is required to be wider, a space to suit the width may go between each letter. *Italics* are used to denote words of more importance, or belonging to another language, and are marked by authors with one line drawn underneath; if two lines, SMALL CAPITALS are denoted; if three lines, FULL CAPITALS.

It is a common error to suppose that printers spell and read backwards, they, however, do nothing of the kind. The type is cast with the head of the letter opposite the nick, so that the latter being kept outwards, when a line is composed a printer reads it from left to right, like an ordinary reader, but with the head of the type reversed or downwards, so that when the type is reversed or impressed upon paper the letters appear in their proper position.

In point of fact a compositor does not look at the *letter* part of the metal at all. He knows in what box of the case certain letters should be found, and while dropping the letter from his fingers into the composing stick his eye is fixed on the nick of the next letter he requires; noticing the nick guides him how to pick up the letter in such a way that he may most readily place it in the composing stick properly in the shortest space of time.

A good plan is to take a piece of printed copy and imitate the spacing as near as possible ; a little practice and the exercise of thought will soon enable the operator to " set up " a sufficient number of lines to form a page.

Emptying the stick is a process very simple " when you know how to do it," but it is also one which requires some little practice to enable a learner to do it without a mishap. We have sometimes seen the tears come into the eyes of a lad, who, perhaps, had been plodding on for two hours getting his " stick " full of small type, when attempting to " lift " it on to the galley, either through a line being improperly spaced, or by his misholding the mass, a rattle was heard, and the whole stickfull tumbled into hopeless confusion, technically called "*pye*." To avoid this "*pye*" making, try to empty two or three lines first, till confidence is gained ; have the stick with its near end resting on the front of the case, the rule in front of the last line set, the thumbs at back of the type, while the middle fingers grasp the sides firmly, keep all solid together by a good pressure, inclining a little towards the brass rule, and turn the whole over so as to rest upon the brass rule, the stick being held immovable by the outer part of the left hand. When a few lines can be safely thus lifted with ease, a stickfull may be tried. It is better to practice this operation a few times with large type, because then an accident is not so serious,

When the page is " set up," if it is not required to be " solid," or the type close together, leads or reglets

may be placed between the lines. If, however, it is decided that the matter composed shall be "open," or leaded, it is better to put the lead or leads in after every line while it is being set-up. When a page is completed, it is necessary to secure it thus:— take a piece of string and tie it carefully all round the page, by laying one end at the bottom, hold it by first left finger on the corner, gently pass it round the middle of the type *once*, let the string pass over the end held by finger, and so pass it round 3 or 4 times, each time drawing it a little tighter, and tuck the end inside the last turn.

The type may then be placed on a flat surface by holding the left thumb on the top edge of the page, the fingers being placed on the face of the letters; the right hand takes hold of the galley and suddenly draws it away from the type, leaving the type on the flat surface (say on a large slab of smooth stone.) Place the chase outside, put a straight piece of furniture along the *head*, another at the left side, a side stick or slanting piece at the right side, and the same at foot, all these should fit nicely, a little allowance being made for the whole to be forced closer together; take the string off by pulling out the end last tucked in and carefully unwind, at every turn closing the furniture around, fit a few quoins, say two at side (when the page is small,) two at bottom, rub the types with the fingers on the face to make them all stand perpendicular; lay a flat smooth piece of wood, called a "planer," on the face

and tap it gently with a mallet, this brings them all to one height, then with the mallet and a wedge-shaped piece of wood strike against the quoins, gently force them a little tighter all round, beginning at the bottom, then at the side, again at bottom, then at side, again place on the planer, give it a smart blow with the end of mallet handle, bringing the mallet down perpendicular.

The whole page will then come bodily up, when it may be laid on the press and a proof taken.

PULLING A PROOF.

The "forme" should now be carried (with the type horizontal) to the press, and adjusted precisely in the *middle* of the press-bed.

It is better to lighten the pressure of any press before hand, so as to get it as light as possible at first.

Some amateurs have broken their presses through inattention to this rule; perhaps they have printed a full-size page when last using the press, and then put a small forme on the centre and applied the full pressure, when the type is liable to injury, or the press, if suddenly jerked, will give way across the top. To proceed, however, put the forme as directed, unscrew the pressure screw or screws, lower the lever gently till a slight resistance is felt, raise the tympan, and if the pull is not hard enough, increase the pressure one quarter turn of the screw or screws, try again, until sufficient pressure is given to show the whole of the types.

The inking roller is a composition of treacle and glue, it is of the greatest importance that this should be in good order, if too hard it will leave too much ink on the type, and make the work look blotchy, if too soft it will not properly distribute the ink, nor leave sufficient on the type without being overcharged. They are materially affected by the weather, a few hot dry days will spoil any roller if not kept from the atmosphere when out of use; while a succession of damp weather would render it too soft to print nicely; hence the necessity of keeping them in an air-tight box. The writer has had one in use over twelve months by adopting this plan.

When rollers are supplied in good working order, *i.e.* a little "tackey" they will adhere to the slab a little when slightly charged with ink, at any attempt to move them.

CORRECTING.

However carefully the type may have been set up, it is very probable some errors will require correcting. Carefully read over the proof and mark the errors in the margin. Take the forme and lay it on the slab upon which it was locked up, which is called the imposing stone. Loosen the quoins with the mallet and shooting stick till they are so loose that the thumb can readily move them; then take a *bodkin* in the right hand, press the point against a word or line in which a

letter requires altering, using one finger of left hand to give pressure in a contrary direction, and raise the line a little higher than the surrounding type, say a quarter of an inch, this will allow the wrong letter to be removed by taking it out with the fingers, then put the correct one in its place. If it is required to insert some few words or lines in any part of the proof, the line where the insertion is to commence, and all following to the end of the paragraph, must be removed as we directed for emptying the stick; this is put into a galley, and the needful words put into the stick in their place, and the matter in the galley taken up line by line and readjusted till it all looks uniform, when it may be tied up, and again placed on the stone. It may then be surrounded with furniture and quoins, planed down, locked up and taken to the press to "make ready."

TO DAMP THE PAPER.

When paper has a rough surface, or is of a hard texture, it is necessary to damp it. Cut up the quantity to the size required. Take eight sheets in the right hand, (this is called a lift,) draw it bodily through a pail of water, let it drain two seconds, lay it down, put eight dry sheets on it, wet the next eight the same way, put eight dry, and so on till all is done; put it between two boards a little larger than the paper, and a 28lb. weight on the top. Let it stand two or three hours, it will then be nicely damped *all* through.

TO USE THE PRESSES Nos. 1 and 2.

Stand the press on a table with the lever-handle to the left hand. The bed-plate has two dots punched in it; place these dots to the right hand, and see that the holes in the bed-plate fit on the points of the adjusting screws. Place the type (when set up and fastened in the chase by its proper furniture) so that it comes as near the centre of the press as possible, and fasten it there by a small quoin or wedge, as you find the chase fastened on receiving it. The head of the type should either be from the printer or towards the right hand. Lay a sheet the size required on the type, square, by feeling the edges all round; slightly damp the parchment, put down the tympan or parchment gently on the type, press down the lever handle, till a slight resistance is felt, release the lever to its place, and raise the tympan, the paper will be found to adhere, then paste the four corners on to the parchment, stick three pins in the parchment, one about an inch from the top at the outer edge, leaving half the pin sticking out, one an inch or more from the bottom of the outer edge, and one in the centre of the bottom edge.

Fasten the slab to the edge of the table by the thumb screw, a very slight pressure will hold it. Place on the centre a small portion of ink about the size of a pea; work the roller about until the ink is all distributed in a thin film on the slab. Pass the roller two or three times over the type, place the sheet to be

printed to the pins, gently lower the tympan on to the type, and pull the lever-handle *down*; if the pressure is not hard enough *all over*, give the screw at each corner half a turn; if the impression is lighter at one part than another, the screw near that part must be gently turned half round and another impression tried, if one corner is too hard the screw must be lowered, any portion of the type being lighter than the rest, should be remedied by a thin piece of paper being pasted on the tympan, so as to fall exactly over it. By so adjusting each screw a good even pressure will be obtained. Upon the management of the impression, the proper supply of ink, and careful rolling, depends the appearance of the work. The smaller the forme to print the less pressure is required. When you have finished printing, hang up the roller, with the ink on it, in an air-tight box. Wash the forme in the sink with lye, made by dissolving $\frac{1}{4}$ lb. of pearlash in one pint of water, apply a little of this by a brush all over the type, and then rinse well with clean water.

THE PRESS BLANKET.

After some time the blanket will become worn or flattened in parts under the parchment, although the latter does not show it. Remove the parchment, well rub the blanket as though washing it, and try it again, or put a *new one*.

TO USE THE PRESS N^o. 4.

Stand the press on a table with the lever-handle to the left hand. Place the type (when set up and fastened in the chase by its proper furniture) so that it comes as near the centre of the press as possible, and fasten it there by a small quoin or wedge ; the head of the type should be either from the printer or towards the right hand. Lay a sheet the size required on the type, square, by feeling the edges all round ; slightly damp the parchment, put down the tympan or parchment gently on the type, push in the bolt or slide in front with the left hand, press down the lever handle till a slight resistance is felt, release the lever to its place, pull back the bolt and raise the tympan, the paper will be found to adhere, paste the four corners on to the parchment, stick three pins in the parchment as shown. Fasten the slab to the edge of the table by the thumb-screw ; place on the centre a small portion of ink, about the size of a pea ; work the roller about until the ink is all distributed in a thin film on the slab. Pass the roller two or three times over the type, place the sheet to be printed to the pins, gently lower the tympan on to the type and pull the lever-handle *down* as before : if the pressure is not hard enough *all over*, give the screw at the end of the lever crank half a turn ; if not then hard enough, give another half a turn, and so on, till the pressure shows slightly all over the back of the sheet to be printed ; any line or part lighter than the rest may

have a thin piece of paper pasted on to the tympan.

If it is required to print a note-heading or any job *not* in the centre of the press, a wooden bearer (supplied) must be put at the other end of press bed, to take part of the pressure: by pasting a piece of card on each end of bearer, or two or three pieces if required, a nice even impression will be obtained.* *Observe.*—The nut at the end of the lever increases or diminishes the entire pressure, the bearer serves to adjust it where too heavy.

See also last seven lines of presses Nos. 1 and 2.

DISTRIBUTING THE TYPE.

When the forme has been washed clean it may be laid on a flat board or stone, the head of the page towards the printer, the quoins loosened all round, chase removed, furniture, &c., all put away; then take a lead or reglet the exact width of the type, put this close to the head, the thumbs on the reglet, middle finger of each hand pressing against the side of the type, the fore-fingers in a slight opening made by inserting the setting rule between the lines, say about 4 or 6 lines down, and lift these lines bodily up resting upon the reglet, with the face of the type towards the printer and the nick upwards. If the type has been allowed to get dry, it should be wetted with a damp sponge before removing the furniture.

* The corks supplied with the press, must be kept about one sixteenth higher than the type, and may be placed at either end, they prevent any tendency to slur. Should the pressure be too hard at *one end*, a piece of reglet may be pasted on one side, and put on the corner of chase *paste upwards*, just the height of the type, this will adhere to the tympan and take off the pressure where too hard.

Now if you take between the thumb and third finger of the right hand the last word from the mass, which will be the one farthest from the left thumb, and lying at the top, you may, having the plan before you, push off the letters with the fore-finger or drop them into the boxes in the same order in which a word is composed, except that the top of the letters are *downwards*, being so cast, that when reversed in printing they may appear in proper position; all the other words may be treated in the same way.

FOUNTS OF TYPE.

A "Fount" of type comprises a fair number of every letter and sign as they are found to be needful in general use, and may consist of one thousand or one hundred thousand letters, and may vary in weight from 1lb. to 1,000lbs. The proportion of a fount may be roughly taken as follows:—

a — 4500	h — 3000	o — 4000	v — 750
b — 1000	i — 4500	p — 1200	w — 1300
c — 2000	j — 250	q — 300	x — 250
d — 2500	k — 400	r — 3500	y — 1300
e — 7000	l — 2500	s — 4000	z — 150
f — 1500	m — 1500	t — 5000	
g — 1000	n — 4000	u — 4250	

The capital letters are also proportioned to each other, but not in the same order as the small letters, or, as printers call them "lower case sorts."

It is very probable that an Amateur may desire to

try his hand on something of less extent than a page of matter at the commencement, hence we give a few suggestions to enable him to accomplish such a design with facility.

Supposing it is desired to set up and print an address card. Take the stick as before directed, set up the name in a plain or fancy type, (it should, however, always be in some character that may be read easily;) put quadrats, which are the large spaces or clumps supplied with a fount, at each end of the name, so as to bring it in the centre of the line; space it, fairly tight, with the proper spaces.

Add the profession in another kind of type, fix this near the end of the right hand side of the stick; put the address in the smallest type, in the left hand corner of the stick. When fixed with quadrats, lift out the whole into a galley, put a pica reglet between the name and profession, and two picas between the profession and the address. Lock up the whole in the centre of a chase, and fasten it on the press; pull a proof, which will then appear somewhat like the following.

JABEZ FRANCIS,

Designer and Printer,

Rochford, Essex.

If it be deemed desirable to print a note, from what has been previously said it will not be difficult to arrange the types in the following style.

THE LODGE,

HOVINGHAM, YORK.

SIR,

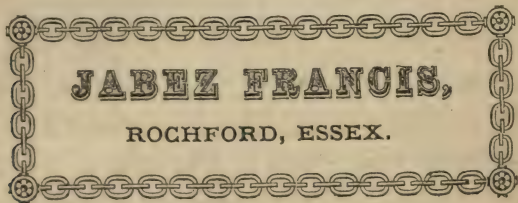
I have delayed writing to you until I had thoroughly tried the £5. 5s. Press you forwarded me. I have carefully compared its working with two others, one by a large advertiser at Leeds, the other by a London maker, and it so far surpasses them, both in APPEARANCE, POWER, and capability of doing good work, that I have much pleasure in bearing testimony to the excellency of your manufacture. The Type and materials you have supplied are also first-class, and the Cases for convenience and workmanship, cannot be surpassed.

REV. H. F. SMITH.

To Mr. FRANCIS, Rochford.

Or supposing that it is wished to set up a label for books: this is rather more difficult to accomplish, but the following hints will render it tolerably easy.

Decide upon the length and width you wish the label to be, select the border you intend to put round it, and set up in the stick as many pieces as will make the length required. Make the stick up to the width of the border, then set up the lines of type, put the whole in a galley, put the necessary spaces between the lines and before and after the top and bottom lines, add the border to the sides, including four corner pieces, you may now easily adjust the depth to suit the pieces of border, by putting in a few leads or a bit of card between the lines so that no space is visible between the pieces of border when locked up; tie the whole around with string, as before directed, lock up in the centre of the chase, pull a proof which will then appear thus—



It would be impossible to give precise rules for the setting up of displayed announcements, so much depends upon the taste of the operator, both in the kind of type selected, and in its arrangement, in fact

there are hundreds of printers who are excellent compositors, clean and quick at work, who can earn a good sum at newspaper or bookwork, but who appear to have no idea how to set up a display card, or a job of ornamental work. We do not say this in any disparagement to our *confrères*. Their "lines may have fallen in pleasant places," but they themselves have not fallen into the line, called in trade parlance "jobbing." Good "jobbing hands," it is well known, command the best situations in mercantile printing offices.

A few general rules may be found serviceable as the method indicated is applicable to several descriptions of work, and is that generally adopted, whether the job is a display-card, circular, hand-bill, or large poster.

Suppose our Amateur or any friend wished to give a lecture on any subject, and to have a printed announcement of the same, let the copy be written out, our printer takes it in hand, his object is to arrest the attention, and to convey to the minds of his readers as much of the subject as possible at a glance, viz.—What it is about—Where it is to take place—When it is to be. Having these three features prominent in his mind, he will keep the lines announcing the primary objects most conspicuous, and all other matters bearing upon them smaller; while the details, which are most likely to be read after attention is arrested, may be in the smallest type. To give an illustration we submit the following:—

COMMERCIAL HALL, WHISTLEHAM.

A LECTURE

WILL BE DELIVERED IN THE ABOVE HALL, BY

JABEZ FRANCIS, ESQ.,

(OF ROCHFORD, ESSEX.)

On Wednesday, January, 28, 1874,

SUBJECT:—

PLEASANT HOURS

AND

HAPPY HOMES.

THE LECTURER WILL INTRODUCE SEVERAL OF HIS
PRINTING PRESSES FOR AMATEURS,
FOR WHICH HE HAS RECEIVED THE THANKS OF THE NATION AND
THE ONLY GOLD MEDAL
AWARDED BY

"The Society for promoting the Happiness of the Family Circle."

TICKETS OF ADMISSION, ONE GUINEA.

Doors open at Seven, Lecture to commence at Eight

It will be observed that the contrast in the style of type used is of great assistance in tasteful display; thus, if a full line of heavy looking capitals is used as a display line, followed by some short lines of smaller type, the next may be of Roman capitals or even small letters, having capital letters to commence important words; the next display line may be a short one of another character, then a long one of a different kind, and so on *ad. lib.*

The lines immediately preceding or following a display line should never be of the same length as the latter, they may if a short display line is used, be made longer than it, if the display line is long, they should be shorter.

Sometimes to make a good full line it is necessary to use a space between each letter, in such a case the space between the words should be proportionately greater. It is as well, if there are plenty of small capitals, to put all the smallest lines containing but few words in that sort of type.

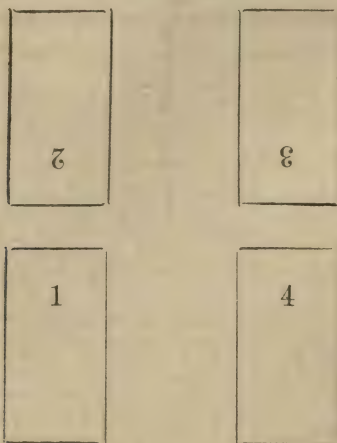
The judicious placing of brass or wood rules is of great importance in the appearance of an announcement. They serve to divide information irrelevant to the main subject, or at times to call attention to important features.

We think from what has been already said the Amateur will be enabled to execute something suitable for the purpose, and gratifying to himself.

IMPOSING.

When four or more pages are set up, and it is intended to print them in the form of a book or pamphlet, they require to be arranged in such a way that when the sheet is folded they shall follow and read on in regular order. This is called imposing.

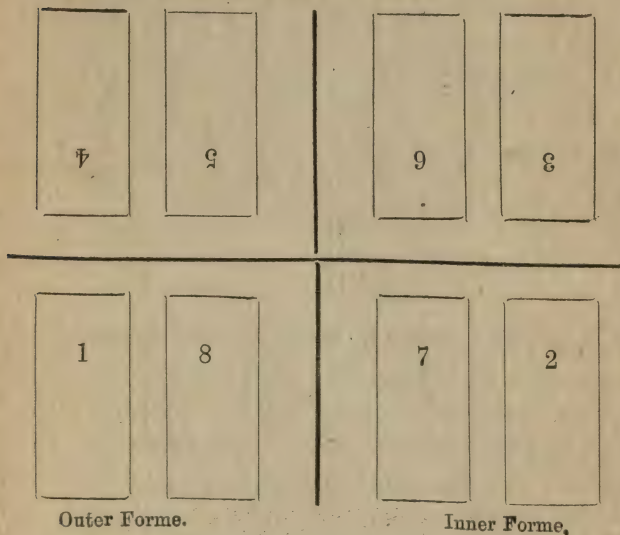
The following example will be sufficient for the purpose of conveying an idea how this is to be accomplished. A sheet in folio containing four pages would be laid down on the table or stone thus :—



The furniture between the heads of the several pages must be exactly alike, also that running down between the same, the distance being determined by the relative size of the pages to the paper, when folded, on which they are to be printed, allowing more margin

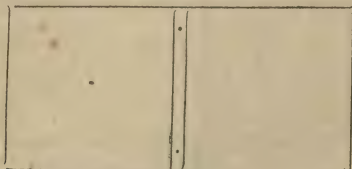
on the outside of the pages, so that when folded and stitched, about a quarter of an inch may be cut off to make the edges smooth and even.

A sheet of quarto, or eight pages, thus :—



A half sheet of four pages now being ready to print, take the inner forme and make it ready at the press thus :—Lay the forme in the middle of the bed and fasten it down ; take a damp sheet, fold it into four, open the sheet into folio and lay this half in proper position on the pages, feeling the edges of the type to see that the sheet lays square, damp the tympan, lower it on to the sheet and apply a light pressure, raise the tympan carefully and the sheet will be found

to adhere, open and paste the corners of the sheet to the tympan, fasten on the frisket, pull a slight impression and cut out the printed part; this allows the type to print through the places cut out, the frisket keeps all other parts of the sheet clean. Now place in the fold of the sheet two points, like drawing pins, at an equal distance from each margin, thus:—



These may be fastened by being enclosed in paper and pasted on to the tympan (the sheet being raised at one corner to allow this to be done) and the back of the sheet, when the point comes through, having a little paste put on it, will hold the drawing pin firm when dry. The use of these points will be explained as we proceed.

Fix the pins in the tympan as before directed and pull a fair proof; “bring up” to a nice even impression by adding a thin piece of paper over any lighter part or two or three pieces if needful, or by the adjusting of suitable *bearers*, where any light lines may appear too heavy. When the result is satisfactory print off the whole of the damp paper on one side. This done, remove the inner forme and lay on the outer. If the chases are similar and the furniture

corresponds in each forme, lay this outer forme so that the folios of the pages fall exactly over the folios of the inner forme; and if they will not come exactly in the same place, the points must be shifted on the tympan until you obtain a perfect register, when the *holes* already made by the first printing are placed *on the points* instead of using pins which are not now required. This adjusting of the points to the holes or the forme to the points is called "getting the register," and when many pages are imposed together it requires a little experience to do it accurately. When all is nicely in "register," remove the old sheet from the tympan, sponge the latter, and affix a clean sheet (being careful not to remove the points), bring it up even as before and proceed to print. Keep the quantity of ink the same on the outer forme as was used for the inner, as it looks very bad to have one page black and the next grey. As you proceed you will most likely observe the sheet on the tympan becomes blackened; this must be avoided by putting on a clean sheet of thinner paper to come between the tympan sheet and the sheet to be printed, called a "set off;" as soon as this appears soiled remove it and affix another (perhaps about every thirty or forty impressions).

The sheets having been all printed, hang them up to dry if you have any means of pressing them afterwards. This is generally accomplished by placing the sheets alternately in glazed boards, and subjecting the whole to very great pressure in a standing press; but as it

can hardly be expected that an amateur possesses this convenience, we introduce a plan that with a little care will make them look almost as well.

HOT PRESSING.

The sheets will not require to be hung up to dry for this operation. Provide one quire of demy of any colour and medium quality, and lay it on a flat hard surface—a table will do. Have two flat-irons at the fire which must not be allowed to get so hot as they are used for linen. Lift up one half sheet of the demy pad, lay the damp sheet on this face downwards, let the half sheet go down on this and pass the iron once over it equally, raise the half sheet of demy and the proof will be found nicely pressed, every impression being removed. Repeat the operation till the whole are hot-pressed, when, if judiciously done, they will look very well and may be done in this way at the rate of 100 an hour.

FOLDING.

The sheets must now be folded so that the figures at the head of the pages drop on to each other, regardless of how the edges may correspond, as the pages having equal margins *inside* must come true. Put on the wrapper, pass a needle of thread from inside to out, then from outside to in, tie, and cut off the end. All the pamphlets or tracts having now been stitched, “knock them up” on the backs, then at the head

put them under a heavy weight for two or three hours (if you have not a screw press) and then proceed to cut the edges.

CUTTING.

Cutting the edges is an operation requiring good apparatus to do it first-rate, but it may be done creditably with simple tools as follows:—Get a piece of beech, 1in. thick, 6in. wide, and 12in. long, another to fit on this 5in. wide, the top piece having two half-inch holes at each end, through which pass a large thumb or hand screw, fitting into holes in the bottom piece, which may be raised up by having two 2-in. blocks glued under, to allow the ends of the screws to work through the beech bed without touching the table, if you have a spiral spring between the boards outside the screws it will be more complete, but these are not absolutely necessary. Take several pamphlets say to the thickness of half an inch or an inch, place them between the “press” and screw up the hand screws as tight as you can. Have a stout knife, very sharp, draw it firmly along close to the edge of the top board, and you will see three or four shavings curl off. Repeat the operation, always in one direction, until the whole of the edges are cut. Unscrew the press, turn the books round to the bottom edge, and cut that the same way; then the top edge, and if carefully done you will certainly be pleased with the result.

Where only a few sheets are required to have the

edges cut, the above contrivance is not needed, but a stout piece of board with a straight edge may be used, the board pressed down with one hand, while the knife is drawn along the edge with the other. The principal features to be attended to are to keep the work steady, the knife in the same line, and not to cut too much at a time.

BRINGING UP A WOOD-CUT.

Some of our readers may desire to print wood engravings with a forme of letterpress, this requires a higher knowledge of the art, and may be satisfactorily done as follows.

When the forme is locked up, see that the woodcut is not forced up by having undue pressure of the type on any part of the side or top and bottom edges. Let a line of quadrats be placed down the sides, or wherever there is a hollow space between the engraving and the type, so that the solid quadrats may take the main pressure, and not the "cut," although the latter must not be loose, take the forme to the press and pull a proof, very likely the engraving will hardly show, cut a piece of brown paper just the size and paste on the bottom of the cut, pull a proof, the cut shows fairly at one end while the other does not; cut a piece of paper and put it under the end that does not show enough; repeat this if needed until a fair impression is obtained, but it should not be hard and black all over.

Having now a fair impression of the engraving, but

rather light in appearance, it may be noticed that some parts are as strong as you wish them to appear, while other parts are not strong enough; the printer has now to turn artist and give to this even impression a greater contrast of light and shade. A good idea may be obtained by giving the method pursued in "bringing up" the following engraving:—



Three impressions were taken on thin soft paper; from one the shading representing the outer portion of clouds was cut away, this piece was placed exactly over the impression on the tympan; another piece had both the lighter and the darker portions of the clouds and part of the foreground removed, this was placed in position on the tympan; the third piece had every part cut away except the darker portion of the building, this piece containing the darker portion was then

placed exactly over the same on the tympan; it will thus be observed that the parts required to look darker than others are made to do so by the extra pressure put upon them.

When the "bringing up" is completed it is best to take the sheet from the front of the tympan, lower the latter over the forme and carefully place the sheet inside between the blanket and the parchment; this may be done by making four pinholes through both sheet and blanket before its removal from the front and placing the sheet to the pinholes at the back, then fasten the same with paste on the edges where no printing comes.

In affixing the overlays to the tympan sheet use as *little paste as possible*, only just a touch, sufficient to hold it in its place. The object in putting the sheet inside the tympan is to prevent the abrupt edges of the overlays from having an unpleasant appearance. Never wash woodcuts with lye, use turpentine and a soft brush, then put the cuts in a drawer away from the dust and dirt.

PRINTING CARDS.

When it is required to have but a few lines printed on cards they may be printed dry, but if it is required to print a good size card very full of type the cards must be damped; this may be done as follows:—take a pack of cards in the left hand, run the finger on one end of the pack so that the edges slightly overlap each other

hold the pack firm in the left hand, plunge both hands and cards in a pail of water, and drawing the finger along the edge will cause the cards to spring away from the finger, forcing the water in between ; do this once or twice, turn the pack round without altering the position of the cards, and proceed as before; the water will now have entered between each card if properly done, serve another pack the same till all are wetted, place them pack over pack, and put on the top a piece of wood of about two or three pounds weight, let it stand for an hour, and the whole will be found slightly and evenly dampened. This dampness is almost imperceptible to the touch, but it makes all the difference in the printing ; it will be found that cards thus treated will print easily and look well, whereas it would have been impossible to print them satisfactorily if quite dry.

If it is required to print anything the full size a press will take, or any solid page, it is always best to damp the paper as directed in page 16, as it more readily takes the impression, requires less ink, and any slight loss in the appearance of the surface of the paper may be restored by hot pressing as directed.

CLEANING THE TYMPAN.

It is necessary, after a job is printed, to take a damp sponge and remove every trace of paper and paste from the tympan, that it may be in good condition the next time it is required for use.

Having printed as many as may be required, the type is washed and put away, the roller placed in a box just as it left the slab, as before directed.

CUTTING LEADS AND BRASS RULE.

It is of great importance that leads or brass rule should be cut exactly of a length, leads should be cut to even pica ems. Say a page 20 ems wide is to have a lead between each line, take five 4-em pica quads, place them in the "stick," adjust the slide, (not too tight) and screw it up, cut a lead to fit exactly; lay this lead on to another, mark with a bodkin the length, cut with a strong pair of scissors, and fit it in stick, take another and cut the same way, always using the lead first cut for the gauge. Shears for the purpose may be had at any cutlers from 3/- to 5/- a pair, brass rule may be cut in the same way. If a more expeditious way is required a "lead and rule cutter" may be had for about 25/-, this is a far better tool for the purpose and leaves no burr on the edge.

TO PRINT IN TWO OR MORE COLORS.

Set up the forme in the usual way; before locking-up take out the line or lines for another color and put reglet or quads in of the same size, leaving a blank space; the lines taken out are then to be locked-up in

different chases (if more than two colors,) and each color-line printed in the spaces left, after the first printing is effected.

TO PRINT IN GOLD OR SILVER.

Wash the slab and roller *clean* with turpentine, grind up a little flake-white with printer's varnish till about as thick as printing ink, add to loz. of this about as much *gold size* as will cover a shilling, well grind up with the flake-white and varnish: this is the ink, which should be ground on a stone slab with a muller *i.e.*, a large pebble having a flat smooth surface. Make ready in the usual way, with only a little of this ink on the roller: when you have printed an impression take a small pad of cotton wool and dip it in yellow bronze for gold (for silver, silver bronze) and rub it gently over the whole sheet printed, well filling up the work; brush off the greater portion from the sheet, and print and dust the others until the whole are printed. Let them lay an hour; then take a clean pad of cotton wool or a hare's foot and brush off all the loose bronze. If carefully done, the work will look clear and brilliant. When only a few copies are required a few drops of gold size mixed with ordinary printing ink, will make the bronze adhere.

TO MAKE A GOOD ROLLER.

Take $\frac{1}{2}$ lb. best glue, break it to pieces about an inch

in size, soak it in water two hours, strain the water off and dissolve the glue in a glue pot in the usual way. Keep it stirred,—(the object is to get it dissolved with as *little water* as possible.) When dissolved add 1lb. treacle, well boil together, keep it stirred, after boiling an hour pour it out into the mould prepared for it. The mould may be merely a sheet of tin bent round, and the two edges made to meet and soldered. Take the old composition off the roller stock, stick the wire end of stock in a cake of clay, put outside of stock the tin mould (previously oiled,) cut a piece of tin with a hole in to lay across the top of stock to allow the screw to keep it in the middle, then pour in the composition, let it stand all night; it may be pushed out the next morning, ends trimmed off with a knife, and the handle re-fixed to stock, it is then better to let it hang a day or two; if too soft, you have too much water, REMELT, add more glue, if too hard, add more treacle.

TO KEEP THE MATERIALS IN GOOD ORDER.

After printing a job, wash the forme as directed, put the type in case and everything else in its place, especially the roller in an air-tight box.

TO MAKE COLORED INK

To those who wish to execute Ornamental Printing in colors it is essential to have good ink of the tints

desired. To purchase an assortment involves some expense, and it frequently happens that more ink is unavoidably wasted than used from the drying and skinning over of the surface. The plan we have successfully pursued for some years is to keep a can of printer's letter-press varnish and make the ink as required; we are now more especially referring to what are called fancy inks, such as mauve, crimson, magenta, &c., as it is cheaper to purchase ordinary colors, such as blue and red, than to make them. The principal feature in making colored ink is the method pursued in grinding the colors. If the following instructions are carefully attended to, good ink may be made without difficulty.


Have the stone slab and muller *perfectly clean*, taking care that there are no dry lumps of any previous grinding on the edges of either. If you wish to grind a pink take a quarter of an ounce of scarlet drop lake, put this on to the slab and crush it, add a few drops of varnish, and after grinding a few minutes the mass will have the consistency of putty. The main feature is to grind as much of the color into as small a quantity of the varnish as possible, and when it is thoroughly ground, thin it out with more varnish to the required consistency. Having ground this for about five minutes divide it into four, and with the muller tilted on one edge grind a fourth part well for about twenty minutes, frequently scraping it off

the stone and muller as it gets spread about and grinding again. It will now appear much thinner, the color being incorporated with the varnish, put the portion ground into a small earthenware or glass jar, and grind up the remainder in separate portions the same way, adding each portion to the jar when ground. The drop-lake will of itself form an agreeable tint to print with, and may have a little varnish added to a small portion, and reground up before trying it on the roller. Care must be taken not to have it too thin, it must be as thick as the roller will readily distribute it over the ink slab. To make the above into mauve ink, while grinding a small portion of the scarlet lake add a twentieth part of Chinese blue, if this is too deep when a proof is tried add more scarlet, if not deep enough add more blue. Suitable pigments may be obtained to grind up with the varnish for any colors required. For instance, if you require yellow, use chrome; for crimson, carmine and scarlet lake; for blue, Chinese blue, if light blue add flake white; for red, vermillion. Should green ink be required mix some yellow and blue ink together; for brown, blue and red. Before using the above it is necessary that the roller and slab be *perfectly clean*. The safest way is to wash them with lye and rinse them, wipe the roller on an old rag and hang it up for a few hours to dry, but if it is an old one it must not get so dry as not to adhere slightly to the finger when touched.

Specimens of Type.

All orders for Type or Materials must be accompanied by P.O.O. or Cheque to the full amount or they will not be executed; and when Goods are ordered to be sent by post the extra amount for postage must be included.

In Founts suited to the requirements of Amateurs. If less quantities are ordered, the price will be higher, owing to the time occupied in dividing.

 The Founts are all at per lb. and are made up in the smallest quantities really useful. If heavier Founts are ordered a CONSIDERABLE REDUCTION is made, corresponding to that shown in No. 1.

Special Lines or Letters charged double.

0 Nonpareil Roman 3lb at 4/-

A VERY HANDY TYPE.—There are about 800 Types to the pound of this fount, so that 3lbs contain quite sufficient for a few verses, &c. £948685

Complete Founts at per lb.

20lb 10lb 5lb
2/4 2/6 3/0

1 Brevier Roman

A FOUNT OF TYPE comprises a proper proportion of every letter, figures, points, &c., needed, also spaces and blanks to fill up the lines. Some ornamental and large type do not have figures.

2 Brevier Italic 2½lb at 3/6

FOR THE CONVENIENCE of purchasers requiring only occasional lines

3 Long Primer 5lb at 2/4

SOME CUSTOMERS prefer that we should select for them what is suitable,

4 Small Pica 5lb at 2/0

WE ARE WILLING to do our best for such, if they state for what kind of work the type is required, and

5 Pica 5lb at 2/0

TO WHAT AMOUNT they wish to go; our efforts in this respect have given satisfaction, and

6 Great Primer 5lb at 1/8

MANY AMATEURS have been

6a Great Primer Italic same price

BEHOLD! I stand at the door

7 Double Pica 5lb at 1/6

MAY you be pleased 2

7a SAME Price

8 Pica Black 1½lb at 3/9

Pica Austin Black Lupinsad

9 Great Primer Black 2lb at 3/6

The International Exhibition for

10 Double Pica Black 2lb at 3/3

London Chatham and Dover and

11 Nonpareil Extended 1lb at 4/0

NONPARIEL EXPANDED

- 12 Brevier Extended 1lb at 3/6.
ROCHFORD HALL 8900
-
- 13 Long Primer Extended 1½lb at 3/0
BEAUTIFUL NOW 457
Long Primer Antique, MUSICAL do.
-
- 14 Pica Extended 1½lb at 2/6
HUNGERFORD 123
-
- 15 Pica Tuscan 1lb at 3/0
CONCERT AND BALL £1782
-
- 16 Pica Argentine 1lb at 3/6
ILLUSTRATED NEWS
-
- 17 Great Primer Argentine 2lb at 3/0
WHAT ARE YOU
-
- 18 2-line Long Primer Argentine 2lb at 3/0
WHAM PUF TIN
-
- 19 Pica Outline 1lb at 4/0
ILLUSTRATED NEWS
-
- 20 Pica de la Rue 1lb at 4/0
PICA DE LA RUE 45
-
- 21 Pica Latin 1lb at 3/0
PICA LATIN 1LB 3s. COMPLETE

22 Long Primer Skeleton Sans 1lb at 3/6
WHERE ARE YOU GOING £123800

23 Pica Skeleton Sans 1lb at 3/3
THE MORNING TELEGRAPH 12258

23A Long Primer Grotesque 1lb at 3/6
HORTICULTURAL SOCIETY

24 Great Primer Gothic 2lb at 2/6
THE ANNUAL SALE 3247

25 Double Pica Skeleton Sans 3lb at 2/0
THE MODERATOR LAMP

26 2-line English Sans 5lb at 1/9
BRIGHTON.

27 2-line Pica Expanded 5lb at 1/6
STEAM

28 Pica Mercantile $2\frac{1}{2}$ lb at 2/6
Pica Mercantile smallest Quantity $2\frac{1}{2}$ lb 2217

29 Great Primer Mercantile 4lb at 2/3
Nice Type for Circulars 6

30 Long Primer Extended Clarendon 3lb at 2/6
THE ROYAL SURREY GARDENS
Extra Amusements for the Summer

31 Long Primer Caxton 1½lb at 4/0
Last and commodious Steam Vessel to Plymouth. 1078.

31A Long Primer Augustine Black 1½lb. at 4/0

32 Great Primer Caxton 2lb at 3/6

Suitable for Cards 2

33 Great Primer German Text 1½lb at 3/6

The Imperial Gas Company Limited

34 Pica Ancient 1½lb at 3/0

PICA ANCIENT POUND AND HALF 4S 6D

35 Brevier Antique 2lb at 3/6

BREVIEWER ANTIQUE Capitals and small letters 81

36

37 Pica Clarendon 4lb at 2/6

PICA Clarendon Capitals & Small 9

38 Pica Old Style 4lb at 2/0

PICA OLD Style 102

39 Great Primer Old Style 5lb at 1/8

The BULL Inn South

40 Great Primer Ornamented 2lb at 3/3

CHARMING MAY

41 Great Primer Ornamented 2lb at 3/0

EXCURSION TRAIN

42 Double Pica Ornamented 2lb at 3/

CRICKET FIELD

43 2-line English Shaded 3½lb at 2/6

DRESS BALL

44 2-line Pica Ornamented 3½lb at 2/6

GREENWICH

45 2-line Gt. Prim. Text Outline 4lb at 2/6

Joint Stock Bank

46 2-line Long Primer Ornamented 2lb at 2/6

QUEEN BRITISH

47 Double Pica Ornamented 2½lb at 2/8

POST OFFICE

48 Double Pica Ornamented 2½lb at 2/8

THE KING'S OAK

49 2-line Long Primer Orna. 2lb at 3/

THE BUILDING SOCIETY

50 2-line Brevier Condensed 2lb at 2/8

THE SURREY CANAL

51 2-line Brev. Ornamented 1½lb at 3/0

HISTORY OF ENGLAND

52 2-line English Old Style 6lb at 2s

UBI ZAY MATER

53 2-line Gt. Primer Outline 6lb at 2/0

MAC PASTE

54 2-line Pica Condensed 4lb at 2/0

CUMBERLAND

55 4-line Small Pica Text. 5lb at 4/-

J. Francis, Rochford.

56 2-line Gt. Prim. Ornamented 5lb at 2/-

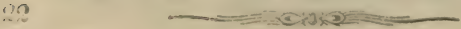
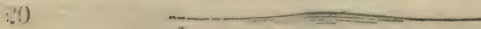
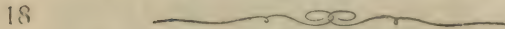
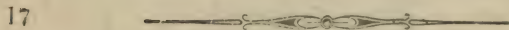
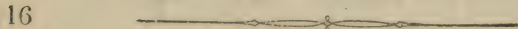
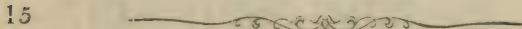
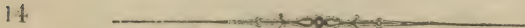
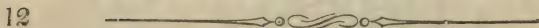
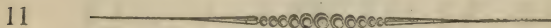
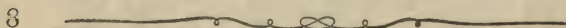
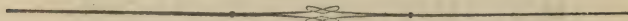
ORNAMENTED
THESES

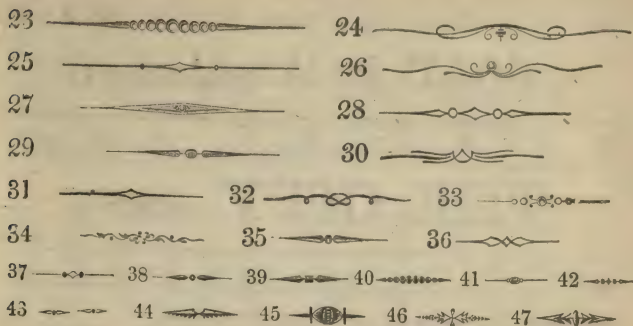
4 (corners)



Ribbon Border 3s 1b

Ornamental Dashes Nos. 1 to 7 9d each, 8 to 16 6d, 17 to 21 1d
25 to 36 3d. 37 to 47 2d each.





*The prices include a set of 4 corners, Nos. 1 2 3 4 2s. a set,
5, 6, 7, 1s 4d a set.*



Bought of *L M* 



Cheque, 1s.

57

Great Primer Antique

4lb at 2/3

SOLD by Auction on

58

Double Pica Clarendon

5lb at 2/

THE CITY easy

59

2-line English Clarendon

5lb at 1/6

FREEHOLD red

60

2-line Gt. Prim. Clarendon

8lb at 1/4

WATERboer

61

Any of the 4 following in 6lb founts at 1s 6d

**PRINTING
NATURE 1853
ENGLISH
BRIGHTON**

62 Any of the 6 following in 8lb founts at 1s 4d

STEAM
MORNING
THINS
TABLES
BRIGHTON
NIM

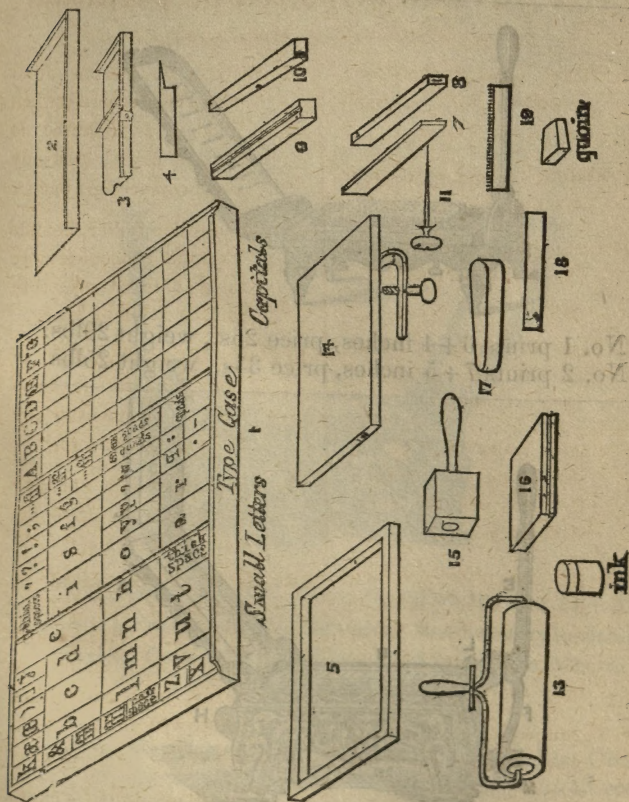
ILLUSTRATIONS OF MATERIALS

USED IN

“The Art and Mysteries of Printing.”

- 1 Double Case, for holding a complete fount of type and a fancy fount.
- 2 Galley, to hold type when “set up.”
- 3 Composing Stick, with shifting slide, to make any width.
- 4 Brass Setting Rule: (these are cut by the printer to fit any measure).
- 5 Chase, made of iron, in which type must be fixed by aid of furniture, side-stick and quoins.
- 7 & 8 Nonpareil and Pica Reglet: (thin lengths of oak to go between lines, where required to be wide apart.)
- 9 Furniture, to go inside of chase, against which the type is placed.
- 10 Side and Foot Sticks, one length goes at side, one at foot of page, then Quoins (12) are fitted.
- 11 Bodkin, for raising up a letter to be removed when another is required to take its place: used only when correcting a page.
- 13 Composition Roller, flexible like india-rubber but more tacky, to leave only a thin surface of ink on type.
- 14 Iron Slab, on which to spread the ink: it can be fixed in a moment to any table by thumb-screw
- 15 Mallet, used with Shooting Stick (17) to drive the quoins rather tight.
- 16 Planer, to be placed on surface of type (smooth side downwards) and tapped with mallet, to nicely level the surface before wedging or “locking up.”
- 18 Plain Brass Rule, (is cut to any length required by the printer) and forms a thin-face line, thus _____
- 19 Dotted Rule, do. do.

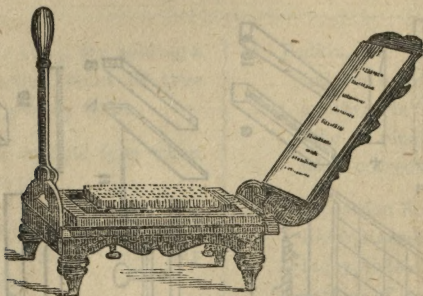
All the presses have now a PLANED IRON surface on the top or platten, Nos. 4 and 5 have both iron surfaces planed. The 55s. press is therefore not now made,



Every Press is guaranteed to do all that is stated in the Prospectus, or the MONEY WILL BE RETURNED.

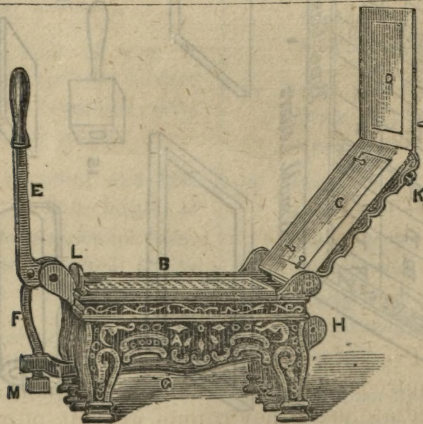
AMATEUR PRINTING PRESSES,

Strongly made of Iron, will print any description of work to sizes specified as well as any press made.



No. 1 prints 6 + 4 inches, price 25s., weight 20lbs.

No. 2 prints 7 + 5 inches, price 35s., weight 25lbs.



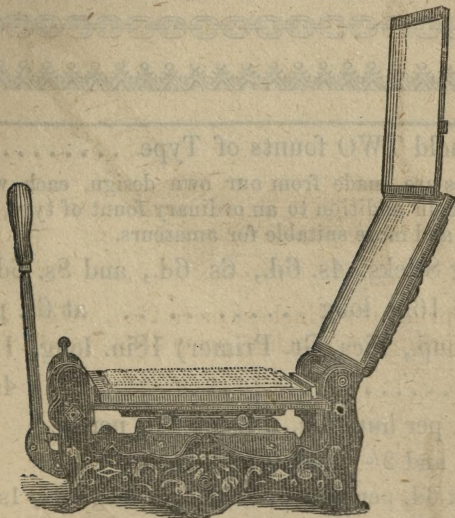
No. 4 prints $9\frac{1}{2} + 8$, (type surface $8\frac{1}{2} + 7$), weight 50lbs., £3 3 0.

All the Presses have now a PLANED IRON SURFACE on the top or platten, Nos. 4 and 5 have both iron surfaces planed.

JAREZ FRANCIS, ROCHFORD, ESSEX,

Inventor and Sole Manufacturer.

The prices include Inking Roller and Chase to hold Type.



No. 5 prints 12+9, £5 5 0, (type surface 11+8)

There is a Frisket added to this press (not necessary to smaller.)

Packing Cases—Nos. 1 & 2 1s., No. 4 1s. 6d., No. 5 2s. 6d.

These Presses are Simple, Effective, Portable, Cheap. They require no fixing, are sent out complete and ready for immediate use; they cannot get out of order, and will last a lifetime. The Nobility, Clergy, Officers in the Army and Navy, Professional men, Tradesmen and Mechanics have them in use, and their united testimony is that they are "*exceedingly useful, and just the thing for their requirements.*"

Borders and Cheques all at 3/ per lb., in single lbs.



Cases to hold TWO founts of Type 5s.

These Cases are made from our own design, each will hold a Fancy-fount in addition to an ordinary fount of type, hence they are cheaper and more suitable for amateurs.

Composing Sticks, 4s. 6d., 6s. 6d., and 8s. 6d. each.

Brass Rule 16in. long at 6s. per dozen

Reglet (Nonp., Pica, Gt. Primer) 18in. long, 1s. ,,

Furniture ,, 4s. ,,

Quoins, 2s. per hundred. Leads 8d. per lb.

Galleys 1/6, and 2/- Bodkins 3d. each.

Black Ink 6d. per tin ; red, blue, or magenta, 1s. per tin.

MUSIC TYPE to order, 5lb. founts from 10s. per lb. Gee's

"Excelsior" MUSIC COPYING APPARATUS, Free by post 19 stamps.

Every description of Materials supplied.